

*CLAIM AMENDMENTS*

100. (Currently Amended) An isolated immunogenic peptide consisting essentially of a portion of SEQ ID NO: 39, wherein said portion comprises (i) at least 9 contiguous amino acids from amino acids 56-70 of SEQ ID NO: 39 or (ii) at least 9 contiguous amino acids from amino acids 448-462 of SEQ ID NO: 39, or a derivative of either of the foregoing, wherein the amino acid sequence of the derivative is at least 85% identical with the immunogenic peptide, wherein the immunogenic peptide is about 9 to about 34 amino acids in length and or derivative thereof is recognized by a CD4<sup>+</sup> T lymphocyte, which is restricted by a Major Histocompatibility Complex (MHC) Class II molecule.

101. Cancelled.

102. (Currently Amended) The immunogenic peptide of claim 100, wherein the portion comprises peptide consists essentially of amino acids 56-64 and 66-70 of SEQ ID NO: 39 and wherein amino acid 65 of SEQ ID NO: 39 is substituted with a valine.

103. (Currently Amended) The immunogenic peptide of claim 100, wherein the portion comprises peptide consists essentially of amino acids 448-450 and 452-462 of SEQ ID NO: 39 and wherein amino acid 451 of SEQ ID NO: 39 is substituted with a phenylalanine.

104. Cancelled.

105. Cancelled.

106. Cancelled.

107. (Previously Presented) The isolated immunogenic peptide of claim 100, wherein the peptide consists of amino acids 56-70 of SEQ ID NO: 39.

108. (Previously Presented) The isolated immunogenic peptide of claim 100, wherein the peptide consists of amino acids 448-462 of SEQ ID NO: 39.

109. (Previously Presented) The isolated immunogenic peptide of claim 100, wherein the peptide consists of amino acids 57-70 of SEQ ID NO: 39.

110. (Previously Presented) The isolated immunogenic peptide of claim 100, wherein the peptide consists of amino acids 449-462 of SEQ ID NO: 39.

111. (Previously Presented) The isolated immunogenic peptide of claim 100, wherein the peptide consists of amino acids 450-462 of SEQ ID NO: 39.

112. (Previously Presented) The immunogenic peptide of claim 100, wherein the MHC Class II molecule is Human Leukocyte Antigen (HLA)-DR.

113. (Previously Presented) The immunogenic peptide of claim 112, wherein the HLA-DR is HLA-DRB1\*0401.

114. (Previously Presented) The immunogenic peptide of claim 100 linked to an MHC Class II molecule, or a portion thereof.

115. (Previously Presented) The immunogenic peptide of claim 114, wherein the portion of the MHC Class II molecule is the  $\beta$  chain of the MHC Class II molecule.

116. (Previously Presented) A composition comprising an immunogenic peptide of claim 100.

117. (Previously Presented) A composition comprising an immunogenic peptide of claim 114.

118. (Previously Presented) A method of inducing CD4 $^{+}$  T lymphocytes to respond to melanoma, which method comprises:

- (i) contacting antigen presenting cells with a composition of claim 116 *in vitro*, and
  - (ii) simultaneously or subsequently exposing CD4 $^{+}$  T lymphocytes to the antigen presenting cells *in vitro*,
- whereupon the CD4 $^{+}$  T lymphocytes are induced to respond to melanoma.

119. (Previously Presented) The method of claim 118, wherein the CD4<sup>+</sup> T lymphocytes are obtained from a host and the method further comprises:

- (iii) administering the CD4<sup>+</sup> T lymphocytes to the host.

120. (Previously Presented) The method of claim 119, wherein the host is a mammal.

121. (Previously Presented) The method of claim 120, wherein the mammal is a human.

122. (Previously Presented) The method of claim 119, wherein the antigen presenting cells are obtained from the host.

123. (Previously Presented) A method of inducing CD4<sup>+</sup> T lymphocytes in a host to respond to melanoma, which method comprises:

- (i) contacting antigen presenting cells with a composition of claim 116 *in vitro*, and
- (ii) subsequently exposing CD4<sup>+</sup> T lymphocytes in the host to the antigen presenting cells by administering the antigen presenting cells to the host,

whereupon the CD4<sup>+</sup> T lymphocytes in the host are induced to respond to melanoma.

124. (Previously Presented) The method of claim 123, wherein the host is a mammal.

125. (Previously Presented) The method of claim 124, wherein the mammal is a human.

126. (Previously Presented) The method of claim 123, wherein the antigen presenting cells are obtained from the host.

127. (Previously Presented) A method of inducing CD4<sup>+</sup> T lymphocytes in a host to respond to melanoma, which method comprises administering the composition of claim 116 to the host, whereupon the CD4<sup>+</sup> T lymphocytes in the host are induced to respond to melanoma.

128. (Previously Presented) A method of inducing CD4<sup>+</sup> T lymphocytes to respond to melanoma, which method comprises:

- (i) contacting antigen presenting cells with a composition of claim 117 *in vitro*, and
- (ii) simultaneously or subsequently exposing CD4<sup>+</sup> T lymphocytes to the antigen presenting cells *in vitro*,

whereupon the CD4<sup>+</sup> T lymphocytes are induced to respond to melanoma.

129. (Previously Presented) The method of claim 128, wherein the CD4<sup>+</sup> T lymphocytes are obtained from a host and the method further comprises:

- (iii) administering the CD4<sup>+</sup> T lymphocytes to the host.

130. (Previously Presented) The method of claim 129, wherein the host is a mammal.

131. (Previously Presented) The method of claim 130, wherein the mammal is a human.

132. (Currently Amended) The method of claim ~~128~~ 129, wherein the antigen presenting cells are obtained from the host.

133. (Previously Presented) A method of inducing CD4<sup>+</sup> T lymphocytes in a host to respond to melanoma, which method comprises:

- (i) contacting antigen presenting cells with a composition of claim 117 *in vitro*, and
- (ii) subsequently exposing CD4<sup>+</sup> T lymphocytes in the host to the antigen presenting cells by administering the antigen presenting cells to the host,

whereupon the CD4<sup>+</sup> T lymphocytes in the host are induced to respond to melanoma.

134. (Previously Presented) The method of claim 133, wherein the host is a mammal.

135. (Previously Presented) The method of claim 134, wherein the mammal is a human.

136. (Previously Presented) The method of claim 133, wherein the antigen presenting cells are obtained from the host.

137. (Previously Presented) A method of inducing CD4<sup>+</sup> T lymphocytes in a host to respond to melanoma, which method comprises administering the composition of claim 117 to the host, whereupon the CD4<sup>+</sup> T lymphocytes in the host are induced to respond to melanoma.

138. (New) A derivative of the immunogenic peptide of claim 100, wherein the derivative is selected from the group consisting of (i) a peptide consisting essentially of amino acids 56-62 and 64-70 of SEQ ID NO: 39 and wherein amino acid 63 of SEQ ID NO: 39 is substituted with a valine; (ii) a peptide consisting essentially of amino acids 448-455 and 457-462 of SEQ ID NO: 39 and wherein amino acid 456 of SEQ ID NO: 39 is substituted with a valine; (iii) a peptide consisting essentially of 450-455 and 457-462 of SEQ ID NO: 39 and wherein amino acid 456 of SEQ ID NO: 39 is substituted with a valine; (iv) a peptide consisting essentially of amino acids 56, 57, and 59-70 of SEQ ID NO: 39 and wherein amino acid 58 of SEQ ID NO: 39 is substituted with a phenylalanine or a valine; and (v) a peptide consisting essentially of amino acids 448 and 450-462 of SEQ ID NO: 39 and wherein amino acid 449 of SEQ ID NO: 39 is substituted with a phenylalanine or a glutamine.

139. (New) The derivative of claim 138, wherein MHC Class II is HLA-DR.

140. (New) The derivative of claim 139, wherein the HLA-DR is HLA-DRB1\*0401.

141. (New) The derivative of claim 138 linked to an MHC Class II molecule, or a portion thereof.

142. (New) The derivative of claim 141, wherein the portion of the MHC Class II molecule is the β chain of the MHC Class II molecule.

143. (New) A composition comprising a derivative of claim 138.

144. (New) A composition comprising a derivative of claim 141.

145. (New) A method of inducing CD4<sup>+</sup> T lymphocytes to respond to melanoma, which method comprises:

- (i) contacting antigen presenting cells with a composition of claim 143 *in vitro*, and
- (ii) simultaneously or subsequently exposing CD4<sup>+</sup> T lymphocytes to the antigen presenting cells *in vitro*,

whereupon the CD4<sup>+</sup> T lymphocytes are induced to respond to melanoma.

146. (New) The method of claim 145, wherein the CD4<sup>+</sup> T lymphocytes are obtained from a host and the method further comprises:

- (iii) administering the CD4<sup>+</sup> T lymphocytes to the host.

147. (New) The method of claim 146, wherein the host is a mammal.

148. (New) The method of claim 147, wherein the mammal is a human.

149. (New) The method of claim 146, wherein the antigen presenting cells are obtained from the host.

150. (New) A method of inducing CD4<sup>+</sup> T lymphocytes in a host to respond to melanoma, which method comprises:

- (i) contacting antigen presenting cells with a composition of claim 143 *in vitro*, and
- (ii) subsequently exposing CD4<sup>+</sup> T lymphocytes in the host to the antigen presenting cells by administering the antigen presenting cells to the host,

whereupon the CD4<sup>+</sup> T lymphocytes in the host are induced to respond to melanoma.

151. (New) The method of claim 150, wherein the host is a mammal.

152. (New) The method of claim 151, wherein the mammal is a human.

153. (New) The method of claim 150, wherein the antigen presenting cells are obtained from the host.

154. (New) A method of inducing CD4<sup>+</sup> T lymphocytes in a host to respond to melanoma, which method comprises administering the composition of claim 143 to the host, whereupon the CD4<sup>+</sup> T lymphocytes in the host are induced to respond to melanoma.

155. (New) A method of inducing CD4<sup>+</sup> T lymphocytes to respond to melanoma, which method comprises:

- (i) contacting antigen presenting cells with a composition of claim 144 *in vitro*, and
- (ii) simultaneously or subsequently exposing CD4<sup>+</sup> T lymphocytes to the antigen presenting cells *in vitro*,

whereupon the CD4<sup>+</sup> T lymphocytes are induced to respond to melanoma.

156. (New) The method of claim 155, wherein the CD4<sup>+</sup> T lymphocytes are obtained from a host and the method further comprises:

- (iii) administering the CD4<sup>+</sup> T lymphocytes to the host.

157. (New) The method of claim 156, wherein the host is a mammal.

158. (New) The method of claim 157, wherein the mammal is a human.

159. (New) The method of claim 156, wherein the antigen presenting cells are obtained from the host.

160. (New) A method of inducing CD4<sup>+</sup> T lymphocytes in a host to respond to melanoma, which method comprises:

- (i) contacting antigen presenting cells with a composition of claim 144 *in vitro*, and
- (ii) subsequently exposing CD4<sup>+</sup> T lymphocytes in the host to the antigen presenting cells by administering the antigen presenting cells to the host,

whereupon the CD4<sup>+</sup> T lymphocytes in the host are induced to respond to melanoma.

161. (New) The method of claim 160, wherein the host is a mammal.

162. (New) The method of claim 161, wherein the mammal is a human.

163. (New) The method of claim 160, wherein the antigen presenting cells are obtained from the host.

164. (New) A method of inducing CD4<sup>+</sup> T lymphocytes in a host to respond to melanoma, which method comprises administering the composition of claim 144 to the host, whereupon the CD4<sup>+</sup> T lymphocytes in the host are induced to respond to melanoma.

165. (New) An analog of the immunogenic peptide of claim 100, wherein the analog comprises a conservative substitution of an amino acid residue and wherein the analog is recognized by a CD4<sup>+</sup> T lymphocyte, which is restricted by a MHC Class II molecule.

166. (New) The analog of claim 165, wherein MHC Class II is HLA-DR.

167. (New) The analog of claim 166, wherein the HLA-DR is HLA-DRB1\*0401.

168. (New) The analog of claim 165 linked to an MHC Class II molecule, or a portion thereof.

169. (New) The analog of claim 168, wherein the portion of the MHC Class II molecule is the  $\beta$  chain of the MHC Class II molecule.

170. (New) A composition comprising an analog of claim 165.

171. (New) A composition comprising an analog of claim 168.

172. (New) A method of inducing CD4<sup>+</sup> T lymphocytes to respond to melanoma, which method comprises:

- (i) contacting antigen presenting cells with a composition of claim 170 *in vitro*, and
- (ii) simultaneously or subsequently exposing CD4<sup>+</sup> T lymphocytes to the antigen presenting cells *in vitro*,

whereupon the CD4<sup>+</sup> T lymphocytes are induced to respond to melanoma.

173. (New) The method of claim 172, wherein the CD4<sup>+</sup> T lymphocytes are obtained from a host and the method further comprises:

- (iii) administering the CD4<sup>+</sup> T lymphocytes to the host.

174. (New) The method of claim 173, wherein the host is a mammal.

175. (New) The method of claim 174, wherein the mammal is a human.

176. (New) The method of claim 173, wherein the antigen presenting cells are obtained from the host.

177. (New) A method of inducing CD4<sup>+</sup> T lymphocytes in a host to respond to melanoma, which method comprises:

- (i) contacting antigen presenting cells with a composition of claim 170 *in vitro*, and
- (ii) subsequently exposing CD4<sup>+</sup> T lymphocytes in the host to the antigen presenting cells by administering the antigen presenting cells to the host,

whereupon the CD4<sup>+</sup> T lymphocytes in the host are induced to respond to melanoma.

178. (New) The method of claim 177, wherein the host is a mammal.

179. (New) The method of claim 178, wherein the mammal is a human.

180. (New) The method of claim 177, wherein the antigen presenting cells are obtained from the host.

181. (New) A method of inducing CD4<sup>+</sup> T lymphocytes in a host to respond to melanoma, which method comprises administering the composition of claim 170 to the host, whereupon the CD4<sup>+</sup> T lymphocytes in the host are induced to respond to melanoma.

182. (New) A method of inducing CD4<sup>+</sup> T lymphocytes to respond to melanoma, which method comprises:

- (i) contacting antigen presenting cells with a composition of claim 171 *in vitro*, and
- (ii) simultaneously or subsequently exposing CD4<sup>+</sup> T lymphocytes to the antigen presenting cells *in vitro*,

whereupon the CD4<sup>+</sup> T lymphocytes are induced to respond to melanoma.

183. (New) The method of claim 182, wherein the CD4<sup>+</sup> T lymphocytes are obtained from a host and the method further comprises:

- (iii) administering the CD4<sup>+</sup> T lymphocytes to the host.

184. (New) The method of claim 183, wherein the host is a mammal.

185. (New) The method of claim 184, wherein the mammal is a human.

186. (New) The method of claim 183, wherein the antigen presenting cells are obtained from the host.

187. (New) A method of inducing CD4<sup>+</sup> T lymphocytes in a host to respond to melanoma, which method comprises:

- (i) contacting antigen presenting cells with a composition of claim 171 *in vitro*, and
- (ii) subsequently exposing CD4<sup>+</sup> T lymphocytes in the host to the antigen presenting cells by administering the antigen presenting cells to the host,

whereupon the CD4<sup>+</sup> T lymphocytes in the host are induced to respond to melanoma.

188. (New) The method of claim 187, wherein the host is a mammal.

189. (New) The method of claim 188, wherein the mammal is a human.

190. (New) The method of claim 187, wherein the antigen presenting cells are obtained from the host.

191. (New) A method of inducing CD4<sup>+</sup> T lymphocytes in a host to respond to melanoma, which method comprises administering the composition of claim 171 to the host, whereupon the CD4<sup>+</sup> T lymphocytes in the host are induced to respond to melanoma.